



# ATI TV Wonder™ 650 PCI

## User Guide

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#### **Documentation Updates**

AMD is constantly improving its product and associated documentation. To maximize the value of your AMD product, you should ensure that you have the latest documentation. AMD's documentation contains helpful installation/configuration tips and other valuable feature information.

## Important Safety Instructions

**Note:** This product is for use only with compatible UL-listed personal computers that have installation instructions detailing user installation of this class of product.

### Read all instructions before beginning installation.

All safety and installation instructions should be read before the product is installed or operated.

### Retain all instructions.

Safety, installation, and operating instructions should be retained for future reference.

### Heed all warnings.

All warnings regarding the product and its operating instructions should be adhered to.

### Use appropriate grounding.

#### Caution:

For continued protection against the risk of electric shock and fire, install this accessory only in products equipped with a three-wire grounding plug, a plug having a third (grounding) pin. A three-pin plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the desired outlet, contact an electrician to replace the obsolete outlet. Do not remove the grounding pin of a three-pin plug.

### Attach product securely.

All product-securing screws or fasteners should be completely tightened in order to provide continuous bonding between the product and the PC chassis, as appropriate.

### For cards with TV tuners:

- Ground outdoor antenna appropriately.

#### Caution:

Since an outdoor antenna or cable system may be connected to the product, be sure that the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the *National Electrical Code, ANSI/NFPA 70*, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to the antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection of grounding electrodes, and requirements for the grounding electrode.

- Unplug system during storms or prolonged disuse.

#### Caution:

For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product from power-line surges.

- Install outdoor antenna system away from power lines.

#### Warning:

When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits, as contact with them may be fatal.

**Caution:**

An outside antenna system should not be located in the vicinity of overhead power lines or other light or power circuits, or where it can fall into such power lines or circuits.

**Note to CATV System Installer**

This reminder is provided to call the CATV systems installer's attention to Section 820-40 of the NEC, which provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building as close to the point of cable entry as is practical.

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### Product Overview

Your ATI TV Wonder™ 650 is an advanced PCI TV tuner card that lets you enjoy a superior home theater experience from your computer.

The ATI TV Wonder™ 650 includes the following features:

- ATSC digital TV tuner.
- NTSC analog TV tuner with motion-adaptive 3D comb filtering.
- FM radio tuner.
- Worldwide analog stereo audio decoding with digital output to the PC.
- Hardware noise reduction.
- Personal video recorder (PVR) to let you pause, rewind, or record live TV, or schedule recordings.

**Note:** The digital TV tuner also allows you to receive unencrypted digital cable channels (Clear QAM channels). Availability of Clear QAM channels varies by area and by cable provider.

ATI TV Wonder™ 650 also includes ATI Catalyst™ Media Center (CMC) multimedia software. CMC features include the following (available only when using CMC):

- Electronic program guide.
- Video converter, with support for capturing or converting video in a number of formats, including MPEG-1, MPEG-2, MPEG-4, DivX, WMV9, and H.264.
- DVD decoder software.
- DVD authoring software.

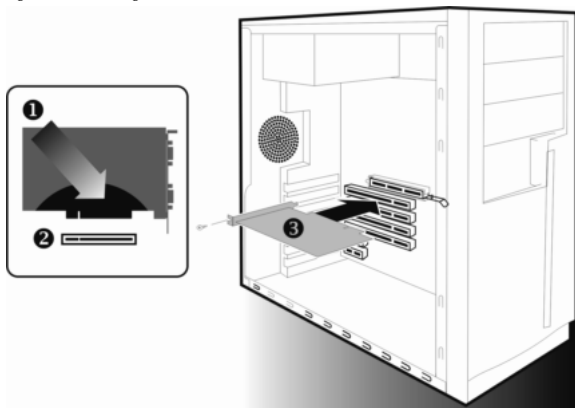
## System Requirements

<b>Hardware</b>	<ul style="list-style-type: none"><li>· AMD Athlon™ or AMD Sempron™, Intel® Pentium® 4 or Celeron®, (or compatible) CPU.</li><li>· Sound card and speakers.</li><li>· System memory:<ul style="list-style-type: none"><li>· For Windows® XP: 256 MB required, 512 MB or more recommended for better performance.</li><li>· For Windows Vista™: 1GB required, 2 GB or more recommended for better performance.</li></ul></li><li>· CD drive (for installation software).</li><li>· An ATI Radeon™ DirectX 9 compatible or higher graphics card is recommended for optimal display output quality.</li><li>· Cable TV signal or amplified antenna.</li><li>· Free PCI slot on motherboard.</li></ul>
<b>Operating System</b>	<ul style="list-style-type: none"><li>· Windows XP Media Center Edition 2005.</li><li>· Windows XP Home Edition, Service Pack 2.</li><li>· Windows XP Professional Edition, Service Pack 2.</li><li>· Windows Vista Home Premium or Ultimate Edition.</li></ul>
<b>Decoder</b>	<ul style="list-style-type: none"><li>· An MPEG-2 decoder (a DVD player or multimedia application, such as ATI Catalyst Media Center) must be installed to play DVDs or MPEG-2 video files captured by the ATI TV Wonder™ 650.</li></ul>
<b>Monitor</b>	<ul style="list-style-type: none"><li>· High-resolution MultiSync or multi-frequency monitors or any other type of VGA monitor.</li><li>· Digital flat-panel (DFP) displays or digital CRT display.</li></ul>



### Installation Diagram

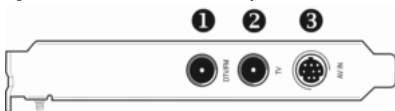
Figure 2-1 Installing Your Tuner Card



1	PCI card.
2	PCI connection on motherboard.
3	Card insertion point.

## Backplate Connections

Figure 2-2 ATI TV Wonder™ 650 Backplate



The following connections are available on the backplate of your tuner card:

1	DTV/FM. FM Radio and Digital TV antenna coaxial connection
2	TV. Cable TV Coaxial Connection
3	AV IN. Audio/video connection (to purple adapter)

## Hardware Installation

To install your hardware:

1. Turn off the computer, monitor, and other peripheral devices.
2. Unplug the computer's power cord, and disconnect all cables from the back of your computer.

**Caution:**

Wait approximately 20 seconds after unplugging the power cord before disconnecting a peripheral or removing a component from the motherboard to avoid possible damage to the motherboard.

3. Remove the computer cover. If necessary, consult your computer's manual for help in removing the cover.

**Caution:**

Remember to discharge your body's static electricity by touching the power supply or the metal surface of the computer chassis before touching the motherboard or components.

4. Locate an available PCI slot and, if necessary, remove the metal back-plate cover.
5. Align your card with the slot, then press the card in firmly until it is fully seated.
6. Screw in or fasten the card securely and replace your computer cover.
7. Reconnect any cables you have disconnected, and then plug in the computer's power cord.
8. Attach a TV antenna or coaxial cable to the TV connector on your ATI TV Wonder™ 650.

- For over the air digital TV, connect a DTV antenna (if available) to the DTV/FM connector.
  - For FM radio, attach an antenna to the DTV/FM connector.
  - If your cable service provides an FM signal, you can use a splitter to connect the cable to the DTV/FM and TV connectors on your card.
9. Plug the purple input adapter provided with your ATI TV Wonder™ 650 into the AV IN connection.
  10. Attach your S-video source and/or composite source to the proper input on the purple input adapter.
  11. Turn on the monitor, and then your computer.

If you have properly installed your card, operating system messages will appear once the boot procedure is finished. Proceed with the installation of drivers and software.

## Software Installation

### Note:

- You must install or reinstall the drivers and software in the following cases:
  - After you have installed the card in your system.
  - After you have reinstalled or upgraded your operating system.
- To install or remove the drivers, you must be logged on as a user with administrator rights. We also recommend that you have the latest Windows Service Pack installed.
- If a previous version of the product is installed on your machine, uninstall the drivers and software for the previous version.
- The setup and install screens are displayed in English if your operating system's language is not supported

To install your software:

1. After installing your tuner, start your system.
2. When the **Found New Hardware Wizard** appears, click **Cancel**. When the **System Settings Change** window asks you to restart your computer, click **No**.
3. Insert the installation CD into your CD drive. The installation screen appears.

If your CD autorun is not enabled or the **ATISSETUP** utility does not start automatically, follow these steps:

- a. In the Windows task bar, click the **Start** button.
- b. Click **Run**.
- c. In the **Run** dialog, type **X:\ATISSETUP.EXE** (where X: is your CD/DVD drive).
4. Click **Software Install**. The Software Install screen appears.
5. Click **Install CATALYST**. The ATI Software screen and installation wizard appear.

6. Click **Next** and follow the instructions in the installation wizard to install your drivers and configuration software.

**Note:** The **Express** installation option is recommended. Custom installation allows you to select individual software components for installation.

7. When the driver and software setup concludes, the wizard's Setup Complete dialog box appears. To restart your computer and immediately enable the installed software, click **Finish**.

**Note:** If you select "No, I will restart my computer later", click **Finish** to close the wizard, then click **Back** to return to the main installation screen, and **Exit** to close the installer.

You may be required to reboot your computer after installing the drivers and software.

After the system reboots, the Found New Hardware message may display the Digital Signature Not Found message. Click **Yes** or **Continue** to complete the driver installation.

# Using Your ATI TV Wonder™ 650

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## Using Your Multimedia Software

The ATI TV Wonder™ 650 supports the following multimedia software:

- ATI Catalyst Media Center (CMC)
- Windows Media Center® with Windows Vista Home Premium or Ultimate editions
- Windows Media Center® with Windows® XP Media Center Edition 2005

For details on how CMC or Windows Media Center® can help you get the most out of your ATI TV Wonder™ 650, see the online Help files installed with those applications.

To open Windows Media Center®:

1. In the Windows Start Menu, click Media Center.  
or  
From the Windows Start Menu, choose Programs > Accessories > Media Center > Media Center.
2. Click the MY TV button, then click Live TV.

## Connecting External Video and Audio Sources

Your ATI TV Wonder™ 650 lets you connect external devices such as DVD players, camcorders, stereo systems, or TVs as input sources.

You can, for example, connect audio devices to the AUDIO input connector on the backplate of your tuner (see the topic, "Backplate Connections" earlier in this guide.)

You can also connect video devices using the S-VID connector on the backplate, or use composite connections with a composite-to-S-Video adapter.



## Troubleshooting

### Video is unstable or only black and white.

- Check that you are using the correct broadcast standard format.
- Check the quality of the incoming TV signal on another receiver.
- Connect your tuner directly to the cable TV or antenna source. Splitters can degrade the signal.

### No video or audio.

- Check that the speakers are connected and turned on.
- Check that your system's sound device is working properly (**Control Panel > Sounds and Audio Devices**).
- Make sure the monitor is plugged in, turned on, and connected to the computer.
- Make sure the cable or antenna is connected.
- Check that all connectors are securely plugged in to the correct jacks.
- Check that the tuner is securely connected.

### Recording stops unexpectedly.

- Make you have sufficient disk space to accommodate the recording.
- Make sure you are recording to the correct hard disk. Check your software manual for instructions on determining the target drive and folder for your recordings.
- The maximum file size for the FAT32 file system is 4 gigabytes.
- Disable screen savers while recording.
- Disable Power Management while recording.

### Dropped frames during recording.

Dropped frames during video recording indicates that some part of the system is not fast enough to keep up with the recording. Recording video is a very demanding task for even the most powerful system.

- Defragment your hard drive.
- A large, dedicated disk is recommended if you plan to do a lot of video recording.
- Close all other running tasks, including those in the System Tray (clock, popup reminders, virus scanners, etc.)

- Close and exit from any Task Scheduler.
- Do not log on to your network.
- Do not connect new devices while recording.
- Do not open or close CD or DVD trays while recording.
- Do not move the mouse while recording.

## Poor TV reception.

- If you use an indoor antenna, you will get the best results with an amplified model. To avoid interference, place the antenna as far away from the PC monitor as possible.
- Splitting the cable or antenna input can reduce signal quality. For the best reception, connect the cable or antenna directly to your tuner.

## Additional Accessories

Additional and replacement cables, installation CDs, manuals, and other accessories for ATI products can be purchased from the online ATI store at [ati.amd.com/online/accessories](http://ati.amd.com/online/accessories)

## Compliance Information

This section details the compliance information for this product.

### FCC Compliance Information

This product complies with FCC Rules Part 15. Operation is subject to the following two conditions

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with manufacturer's instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



The use of shielded cables for connection of the monitor to the graphics card is required to ensure compliance with FCC regulations. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Complies with FCC 15.107, 15.109, 15.111, and 15.117.

For further compliance information:

Advanced Micro Devices, Inc. 62 Forest Street Marlborough, MA 01752 USA Tel: 508-303-3900

## Industry Canada Compliance Statement

This Class B digital apparatus complies with Canadian ICES-003 and with BETS-7, Section 3.6.

Cet appareil numérique de la Classe B est conforme à la norme NMB-003 du Canada, et NTMR-7, Section 3.6.

## Electrical Safety

UL 60950-1:2003, 1st Edition, CAN/CSA C22.2 No. 60950-1:2003, 1st Edition

To meet UL safety requirements, the computer's maximum room temperature should not exceed 40° C.



